RENT A CAR

(MID-TERM POJECT PHASE - 1 &2)

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Business rules requirements of the system:

The cost of renting a car depends on the car's class. In each class of rental, Rent A Car offers daily, weekly, and monthly rates. Among car models are the make of the car (Tesla, Benz, etc.), the type of car, seating capacity, and colour of the car. A car identification number (CID) uniquely identifies each vehicle. There is an address for the branch where the car is assigned.

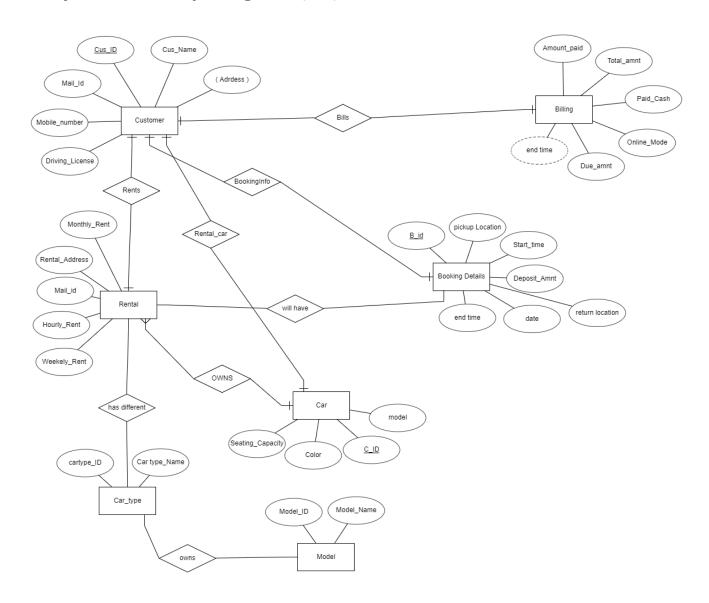
The process of renting a car is as follows.

Prior to picking up the car at the branch location, the customer makes a booking over the phone with the location. A customer's name and address, vehicle class, and the period of rental (days in and days out) are taken by the rental service agent. The customer is informed of the rental rate. In the event that a booking already exists, the service agent finalizes the rental agreement when the customer arrives at the branch location to pick up the car. In addition to the license number of the operator and other information, the service agent discusses with the customer other details needed for the rental agreement process. These details include name, email, and cell phone number and customer have his/her option to choose cartype and model. It is also necessary to deposit a security deposit and determine the customer's billing method online or by cash. Customer's booking information is used to assign a specific car to the rental agreement if they have made a booking. A service agent fills out the booking information first if the customer is a walk-in without a slot reservation. All rentals must be associated with a booking. Please include the start date and time for the rental. Along with the keys to the vehicle, A replica of the rental agreement will be handed over to the customer. The time when the vehicle was picked up by the rental company.

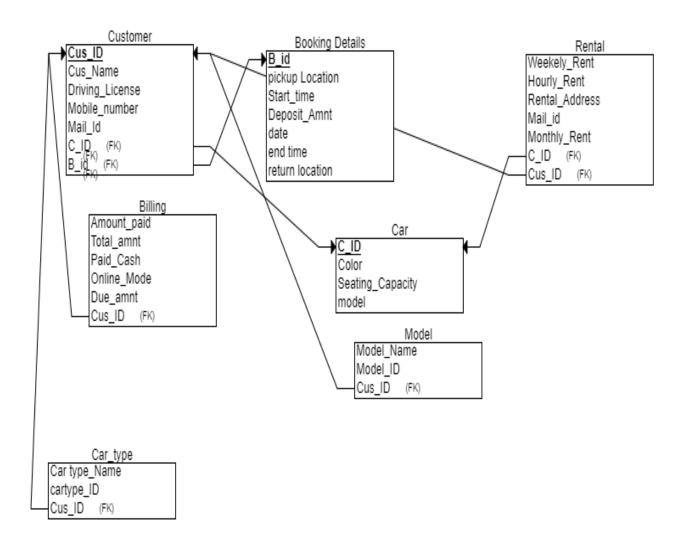
Upon completion of the trip, the car should return to the location. Information that will be filled in when the car is returned is the date and time at which the rental ends. After the rental agreement is completed, the class rental rate is used to calculate the actual rental cost. This cost

is charged to customers online or via cash. No other form of payment is accepted. Penalties will be charged in the event of damage to the car, and the total amount will be recovered from the customer.

Entity-Relationship Diagram (ER):



Relational schema:



CREATION OF TABLES:

BILLING:

```
CREATE TABLE "SD894"."BILLING"

( "AMOUNT_PAID" NUMBER NOT NULL ENABLE,

"TOTAL_AMOUNT" NUMBER,

"PAID_CASH" NUMBER,

"ONLINE_MODE" VARCHAR2(20 BYTE),

"DUE_AMOUNT" NUMBER,

"CUST_ID" NUMBER,

CONSTRAINT "BILLING_PK" PRIMARY KEY ("AMOUNT_PAID"));
```

BOOKINGDETAILS:

⊕ PICKUP

```
CREATE TABLE "SD894"."BOOKINGDETAILS"

( "PICKUP" VARCHAR2(30 BYTE) NOT NULL ENABLE,

"DROP_TIME" NUMBER(20,0) NOT NULL ENABLE,

"START_TIME" VARCHAR2(30 BYTE) NOT NULL ENABLE,

"DEPOSIT_AMNT" NUMBER(30,0) NOT NULL ENABLE,

"DATE_" NUMBER(20,0) NOT NULL ENABLE,

"END_TIME" NUMBER(20,0) NOT NULL ENABLE,

CONSTRAINT "BOOKINGDETAILS_PK" PRIMARY KEY ("PICKUP"));
```

DROP_TIME START_TI... DEPOSIT_... DATE_

⊕ END_TIME

```
CAR:
```

```
CREATE TABLE "SD894"."CAR"

( "C_ID" NUMBER(30,0) NOT NULL ENABLE,

"COLOR" VARCHAR2(20 BYTE) NOT NULL ENABLE,

"SEATING_CAPACITY" NUMBER(20,0) NOT NULL ENABLE,

"MODEL" VARCHAR2(20 BYTE) NOT NULL ENABLE,

CONSTRAINT "CAR_PK" PRIMARY KEY ("C_ID"));
```

CARTYPE:

```
CREATE TABLE "SD894"."CARTYPE"

( "CARTYPE_NAME" VARCHAR2(30 BYTE) NOT NULL ENABLE,

"CARTYPE_ID" NUMBER(30,0) NOT NULL ENABLE,

"CUS_ID" NUMBER(30,0) NOT NULL ENABLE,

CONSTRAINT "CARTYPE_PK" PRIMARY KEY ("CARTYPE_NAME"));
```

CUSTOMER:

```
CREATE TABLE "SD894"."CUSTOMER"

( "CUS_NAME" VARCHAR2(30 BYTE) NOT NULL ENABLE,

"DRIVING_LICENSE" VARCHAR2(20 BYTE) NOT NULL ENABLE,

"Mobile_number" NUMBER NOT NULL ENABLE,

"Mail_id" VARCHAR2(20 BYTE) NOT NULL ENABLE,
```

```
"C_ID" NUMBER NOT NULL ENABLE,
      "B_ID" NUMBER NOT NULL ENABLE,
       CONSTRAINT "CUSTOMER_PK" PRIMARY KEY ("CUS_NAME"));
    ⊕ C_ID
                                                        ∯B_ID
MODEL:
CREATE TABLE "SD894"."MODEL"
 (
      "MODEL_NAME" VARCHAR2(20 BYTE) NOT NULL ENABLE,
      "Model_ID" VARCHAR2(20 BYTE) NOT NULL ENABLE,
      "CUS_ID" VARCHAR2(20 BYTE) NOT NULL ENABLE,
       CONSTRAINT "MODEL_PK" PRIMARY KEY ("MODEL_NAME"));

⊕ MODEL_N… | ⊕ Model_ID

⊕ CUS_ID

RENTAL:
CREATE TABLE "SD894"."RENTAL"
 (
      "WEEKELY_RENT" NUMBER(30,0) NOT NULL ENABLE,
      "HOURLY_RENT" NUMBER(30,0) NOT NULL ENABLE,
      "RENTAL_ADDRESS" VARCHAR2(20 BYTE) NOT NULL ENABLE,
      "Mail_ID" VARCHAR2(20 BYTE) NOT NULL ENABLE,
      "Monthly_Rent" NUMBER(30,0) NOT NULL ENABLE,
      "CUS_ID" NUMBER(30,0) NOT NULL ENABLE,
       CONSTRAINT "RENTAL_PK" PRIMARY KEY ("WEEKELY_RENT"));
```

⊕ HOURLY_... ⊕ RENTAL_...

⊕ Monthly _...

⊕ CUS_ID

INSERTING VALUES INTO TABLES:

BILLING:

INSERT INTO BILLING VALUES('300\$','780\$','700\$','Y','200\$',201);
INSERT INTO BILLING VALUES('200\$','980\$','690\$','Y','290\$',202);
INSERT INTO BILLING VALUES('400\$','680\$','800\$','Y','280\$',203);
INSERT INTO BILLING VALUES('500\$','380\$','500\$','Y','270\$',204);
INSERT INTO BILLING VALUES('100\$','580\$','850\$','Y','260\$',205);

SELECT * FROM BILLING;

	\$ AMOUNT_PAID					
1	300\$	780\$	700\$	Y	200\$	201
2	200\$	980\$	690\$	Y	290\$	202
3	400\$	680\$	800\$	Y	280\$	203
4	500\$	380\$	500\$	Y	270\$	204
5	100\$	580\$	850\$	Y	260\$	205

BOOKINGDETAILS:

INSERT INTO BOOKINGDETAILS

VALUES('10.00AM','11.00PM','1.00AM','100\$','2NDJULY2022','10.00PM','BROADWAY','KEARNY');

INSERT INTO BOOKINGDETAILS

VALUES('09.00AM','11.00PM','2.00AM','200\$','3RDAUGUST2022','09.00PM','JOURNAL SQUARE','HARRISON');

INSERT INTO BOOKINGDETAILS

VALUES('08.00AM','11.00PM','3.00AM','300\$','4RDAUGUST2022','08.00PM','33RD STREET','HOBOKEN');

INSERT INTO BOOKINGDETAILS

VALUES('07.00AM','11.00PM','4.00AM','700\$','5RDAUGUST2022','07.00PM','GROVE STREET','NEWARK');

INSERT INTO BOOKINGDETAILS VALUES('06.00AM','11.00PM','9.00AM','600\$','6RDAUGUST2022','06.00PM','BROOKLYN','BRIDGE WATER');

SELECT * FROM BOOKINGDETAILS;

	₱ PICKUP				DATE_		♦ PICKUP_LOC	
1	10.00AM	11.00PM	1.00AM	100\$	2NDJULY2022	10.00PM	BROADWAY	KEARNY
2	MA00.80	11.00PM	3.00AM	300\$	4RDAUGUST2022	08.00PM	33RD STREET	HOBOKEN
3	03.00 AM	11.00PM	9.00AM	600\$	6RDAUGUST2022	06.00PM	BROOKLYN	BRIDGE WATER
4	09.00AM	11.00PM	2.00AM	200\$	3RDAUGUST2022	09.00PM	JOURNAL SQUARE	HARRISON
5	07.00AM	11.00PM	4.00AM	700\$	5RDAUGUST2022	07.00PM	GROVE STREET	NEWARK
6	06.00AM	11.00PM	9.00AM	600\$	6RDAUGUST2022	06.00PM	BROOKLYN	BRIDGE WATER

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CAR:

 ${\tt INSERT\ INTO\ CAR\ VALUES (12,'BLACK',4,'AUDI'\);}$

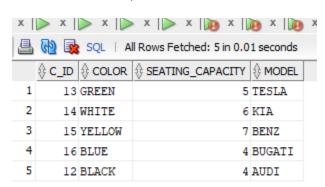
INSERT INTO CAR VALUES(13, 'GREEN', 5, 'TESLA');

INSERT INTO CAR VALUES(14,'WHITE',6,'KIA');

INSERT INTO CAR VALUES(15,'YELLOW',7,'BENZ');

INSERT INTO CAR VALUES(16,'BLUE',4,'BUGATI');

SELECT * FROM CAR;



CARTYPE:

INSERT INTO CARTYPE VALUES('PETROL',1,112);
INSERT INTO CARTPE VALUES('GAS',2,113);
INSERT INTO CARTYPE VALUES('DIESEL',3,114);
INSERT INTO CARTYPE VALUES('ELECTRIC',7,115);
SELECT * FROM CARTYPE;

	♦ CARTYPE_NAME		CUS_ID
1	PETROL	1	112
2	GAS	2	113
3	DIESEL	3	114
4	ELECTRIC	7	115

CUSTOMER:

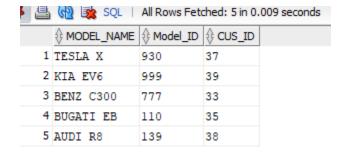
INSERT INTO CUSTOMER VALUES('SUSHMA',145,1127890,'xuu@gmail.com',09,07);
INSERT INTO CUSTOMER VALUES('PRIYANKA',142,1136790,'yuy@gmail.com',08,06);
INSERT INTO CUSTOMER VALUES('SATHVIKA',143,1145533,'zzu@gmail.com',05,04);
INSERT INTO CUSTOMER VALUES('PRATHYU',147,1152277,'yyy@gmail.com',10,11);
INSERT INTO CUSTOMER VALUES('USHA',148,1168899,'ppp@gmail.com',12,13);

SELECT * FROM CUSTOMER;

• •	January SQL All Rows Fetched: 5 in 0.008 seconds								
		♦ DRIVING_LICENSE	Mobile_number	∯ Mail_id	∯ C_ID	∯ B_ID			
1	PRIYANKA	142	1136790	yuy@gmail.com	8	6			
2	SATHVIKA	143	1145533	zzu@gmail.com	5	4			
3	PRATHYU	147	1152277	yyy@gmail.com	10	11			
4	USHA	148	1168899	ppp@gmail.com	12	13			
5	SUSHMA	145	1127890	xuu@gmail.com	9	7			

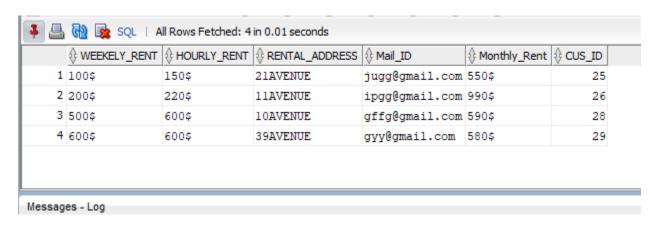
MODEL:

INSERT INTO MODEL VALUES('TESLA X',930,37);
INSERT INTO MODEL VALUES('KIA EV6',999,39);
INSERT INTO MODEL VALUES('BENZ C300',777,33);
INSERT INTO MODEL VALUES('BUGATI EB',110,35);
INSERT INTO MODEL VALUES('AUDI R8',139,38);
SELECT * FROM MODEL;



RENTAL:

INSERT INTO RENTAL VALUES('100\$','150\$','21AVENUE','jugg@gmail.com','550\$',25);
INSERT INTO RENTAL VALUES('200\$','220\$','11AVENUE','ipgg@gmail.com','990\$',26);
INSERT INTO RENTAL VALUES('300\$',500\$,'77AVENUE','guug@gmail.com','980\$',27);
INSERT INTO RENTAL VALUES('500\$','600\$','10AVENUE','gffg@gmail.com','590\$',28);
INSERT INTO RENTAL VALUES('600\$','600\$','39AVENUE','gyy@gmail.com','580\$',29);
SELECT * FROM RENTAL;



DELETION OF TABLE COLUMN:

BILLING:

DELETE BILLING WHERE AMOUNT_PAID='300\$';

SELECT * FROM BILLING;



BOOKINGDETAILS:

DELETE BOOKINGDETAILS WHERE PICKUP = '07.00AM';

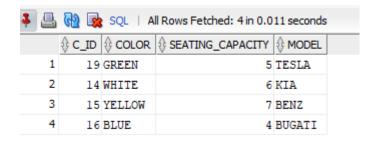
SELECT * FROM BOOKINGDETAILS;

	₱ PICKUP				DATE_	\$ END_TIME	♦ PICKUP_LOC	
1	10.00AM	11.00PM	1.00AM	100\$	2NDJULY2022	10.00PM	BROADWAY	KEARNY
2	09.00AM	11.00PM	2.00AM	200\$	3RDAUGUST2022	09.00PM	JOURNAL SQUARE	HARRISON
3	MA00.80	11.00PM	3.00AM	300\$	4RDAUGUST2022	08.00PM	33RD STREET	HOBOKEN
4	03.00 AM	11.00PM	9.00AM	600\$	6RDAUGUST2022	06.00PM	BROOKLYN	BRIDGE WATER

CAR:

DELETE CAR WHERE COLOR='BLACK';

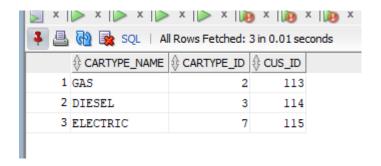
SELECT * FROM CAR;



CARTYPE:

DELETE CARTYPE WHERE CARTYPE_NAME='PETROL';

SELECT * FROM CARTYPE;



CUSTOMER:

DELETE CUSTOMER WHERE CUS_NAME='PRATHYU';

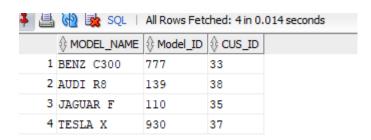
SELECT * FROM CUSTOMER;

		♦ DRIVING_LICENSE	Mobile_number	∯ Mail_id	∯ C_ID	∯ B_ID
1	USHA	148	1168899	ppp@gmail.com	12	13
2	SUSHMA	145	1127890	xuu@gmail.com	9	7
3	Sunitha	142	1136790	yuy@gmail.com	8	6
4	SATHVIKA	143	1145533	zzu@gmail.com	5	4

MODEL:

DELETE MODEL WHERE MODEL_NAME='KIA EV6';

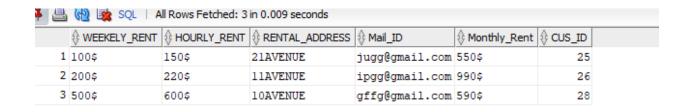
SELECT * FROM MODEL;



RENTAL:

DELETE RENTAL WHERE WEEKELY_RENT='600\$';

SELECT * FROM RENTAL;



UPDATION OF TABLES:

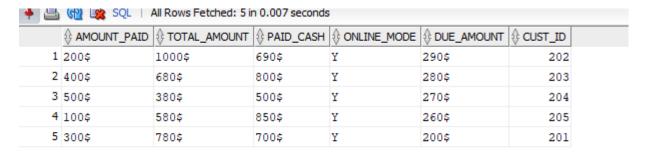
BILLING:

UPDATE BILLING

SET TOTAL AMOUNT = '1000\$'

WHERE AMOUNT PAID = '200\$';

SELECT * FROM BILLING;



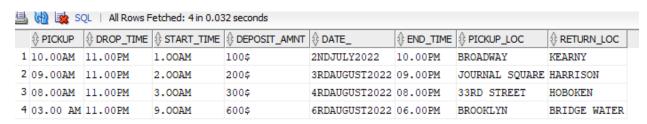
BOOKINGDETAILS:

UPDATE BOOKINGDETAILS

SET PICKUP = '03.00 AM'

WHERE PICKUP_LOC='BROOKLYN';

SELECT * FROM BOOKINGDETAILS;



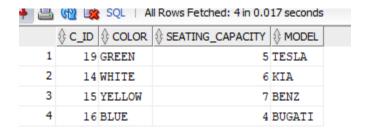
CAR:

UPDATE CAR

SET C_ID = 19

WHERE COLOR = 'GREEN';

SELECT * FROM CAR;



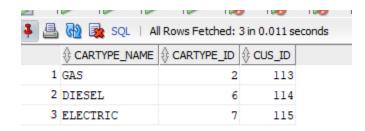
CARTYPE:

UPDATE CARTYPE

SET CARTYPE_ID= 6

WHERE CARTYPE_NAME = 'DIESEL';

SELECT * FROM CARTYPE;



CUSTOMER:

UPDATE CUSTOMER

SET CUS_NAME= Sunitha

WHERE C_ID = 8;

SELECT * FROM CUSTOMER;

		DRIVING_LICENSE		∯ Mail_id	∯ C_ID	∯ B_ID
1	USHA	148	1168899	ppp@gmail.com	12	13
2	SUSHMA	145	1127890	xuu@gmail.com	9	7
3	Sunitha	142	1136790	yuy@gmail.com	8	6
4	SATHVIKA	143	1145533	zzu@gmail.com	5	4

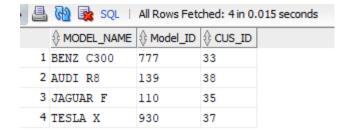
MODEL:

UPDATE MODEL

SET MODEL_NAME = 'JAGUAR F'

WHERE CUS_ID = 35;

SELECT * FROM MODEL;



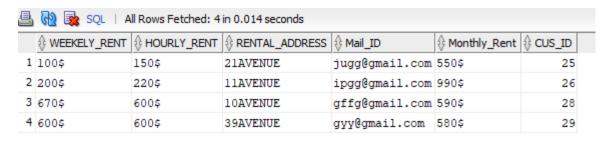
RENTAL:

UPDATE RENTAL

SET WEEKELY_RENT= 670\$

WHERE RENTAL_ADDRESS = '10AVENUE';

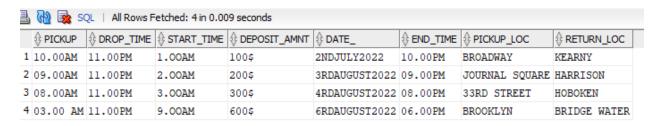
SELECT * FROM RENTAL;



GROUP BY:

SELECT DROP_TIME, COUNT(DROP_TIME) FROM BOOKINGDETAILS GROUP BY DROP_TIME;

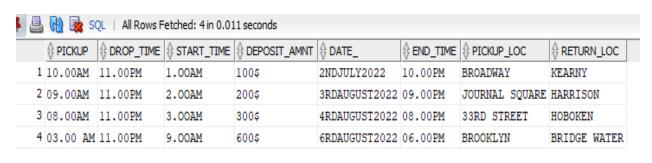
SELECT * FROM BOOKINGDETAILS;



GROUP BY HAVING:

SELECT DROP_TIME,COUNT(DROP_TIME)AS COUNT FROM BOOKINGDETAILS GROUP BY DROP_TIME HAVING COUNT(DROP_TIME)>11.00PM;

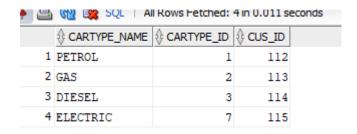
SELECT * FROM BOOKINGDETAILS



NESTED QUERRIES IN:

WHERE CUST ID IN (SELECT CUST ID FROM CARTYPE WHERE CUST ID >0);

SELECT * FROM CARTYPE;



NESTED QUERRIES ALL:

SELECT * FROM CUSTOMER WHERE C_ID > ALL (SELECT C_ID FROM CUSTOMER WHERE C_ID <9);

